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         JUN 06
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                 patent numbers for U.S. applications
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         AUG 13 CA/CAplus enhanced with printed Chemical Abstracts
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         AUG 15 CAOLD to be discontinued on December 31, 2008
NEWS 18
         AUG 15
                 CAplus currency for Korean patents enhanced
NEWS 19
         AUG 27
                 CAS definition of basic patents expanded to ensure
                 comprehensive access to substance and sequence
                  information
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         SEP 18
                 Support for STN Express, Versions 6.01 and earlier,
                 to be discontinued
NEWS 21
         SEP 25
                 CA/CAplus current-awareness alert options enhanced
                 to accommodate supplemental CAS indexing of
                 exemplified prophetic substances
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         SEP 26
                 WPIDS, WPINDEX, and WPIX coverage of Chinese and
                 and Korean patents enhanced
                 IFICLS enhanced with new super search field
NEWS 23
         SEP 29
NEWS 24
         SEP 29
                 EMBASE and EMBAL enhanced with new search and
                 display fields
NEWS 25
         SEP 30
                 CAS patent coverage enhanced to include exemplified
                 prophetic substances identified in new Japanese-
                 language patents
NEWS 26
         OCT 07
                 EPFULL enhanced with full implementation of EPC2000
NEWS 27
         OCT 07
                 Multiple databases enhanced for more flexible patent
                 number searching
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FILE CONTENT: 1840 - 6 Oct 2008 VOL 149 ISS 15

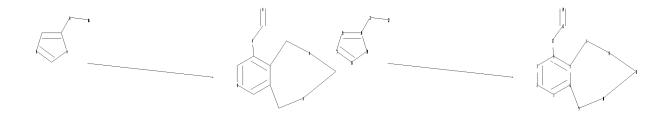
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```
chain nodes :
12 13 14 21 22
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 16 17 18 19 20
chain bonds :
4-12 12-13 13-14 19-21 21-22
ring bonds :
1-2 1-6 2-3
             3 - 4
                 4-5 5-6 5-7 6-9 7-8 8-11 9-10 10-11 16-17 16-20 17-18
18-19 19-20
exact/norm bonds :
4-12 12-13 13-14 16-17 17-18 19-21 21-22
exact bonds :
5-7 6-9 7-8 8-11 9-10 10-11 16-20 18-19 19-20
normalized bonds :
1-2 1-6 2-3 3-4 4-5 5-6
isolated ring systems :
containing 1 : 16 :
Match level:
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:Atom 12:CLASS 13:CLASS 14:CLASS 16:Atom 17:Atom 18:Atom 19:Atom 20:Atom
21:CLASS 22:CLASS
fragments assigned product role:
containing 1
fragments assigned reactant/reagent role:
containing 16
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## L1 STRUCTURE UPLOADED

=> d l1 L1 HAS NO ANSWERS L1 STR

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \* Structure attributes must be viewed using STN Express query preparation.

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FULL SEARCH INITIATED 12:14:20 FILE 'CASREACT'

SCREENING COMPLETE - 3 REACTIONS TO VERIFY FROM 1 DOCUMENTS

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SEARCH TIME: 00.00.01

L2 1 SEA SSS FUL L1 ( 2 REACTIONS)

=> d ibib abs fhit tot

L2 ANSWER 1 OF 1 CASREACT COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 143:7535 CASREACT

TITLE: Manufacture of vitamin B6 and related 9-acyloxy-1,5-dihydro-8-methylpyrido[3,4-

e][1,3]dioxepins

INVENTOR(S): Fischesser, Jocelyn; Fritsch, Helmut; Gum, Andrew

George; Karge, Reinhard; Keuper, Ralf

PATENT ASSIGNEE(S): DSM IP Assets B. V., Neth. SOURCE: PCT Int. Appl., 23 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

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PATENT NO.
                             KIND DATE
                                                            APPLICATION NO. DATE
       WO 2005049618 A1 20050602 WO 2004-EP12655 20041109
             W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
                   CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
                   GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
            GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,
                   NE, SN, TD, TG
                                A1 20060802
       EP 1685133
                                                            EP 2004-818764 20041109
            R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
                   IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS
                               A 20061220 CN 2004-80034214 20041109
       CN 1882592
                                 Τ
                                         20070510
                                                              JP 2006-540247 20041109
       JP 2007511558
       US 20070072254
                                         20070329
                                                              US 2006-579836
                               A1
                                                                                       20060608
PRIORITY APPLN. INFO.:
                                                               DE 2003-10353999 20031119
                                                               WO 2004-EP12655 20041109
OTHER SOURCE(S): MARPAT 143:7535
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CT

GΙ

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB A process for manufacturing a 3-un-, 3-mono- or 3,3-disubstituted 9-acyloxy-1,5-dihydro-8-methylpyrido[3,4-e] [1,3]dioxepin I [R2, R3 = H, C1-4-alkyl C2-4-alkenyl; R4 = C1-4-alkyl, C1-4-haloalkyl, Ph-(C1-4-alkyl), Ph; CR2R3 = C4-6-cycloalkylidene] and optionally for manufacturing pyridoxine involves performing an addition reaction between a 4-methyl-5-alkoxy-oxazole II [R1 = C1-4-alkyl] and a 2-un-, 2-mono- or 2,2-disubstituted 4,7-dihydro-1,3-dioxepin III in the substantial absence of a solvent and a catalyst to give a product mixture consisting essentially of the appropriate Diels-Alder adduct IV in a major proportion and the appropriate 3-un-, 3-mono- or 3,3-disubstituted 1,5-dihydro-8-methylpyrido[3,4-e][1,3]dioxepin-9-ol V in a minor proportion, removal of a substantial proportion of the unreacted oxazole and dioxepin starting materials from the product mixture by distillation under reduced pressure, addition of a substantially anhydrous organic acid to said product mixture and rearrangement

the Diels-Alder adduct IV to further V in the presence of said substantially anhydrous organic acid with removal of the generated alkanol by

distillation under reduced pressure, and acylation of the resultingly enriched quantity of V with an added carboxylic acid anhydride, (R4CO)2O to produce the desired I, and optionally converting this so-manufactured acylation product I to pyridoxine by acid hydrolysis for achieving deprotection and deacylation. Pyridoxine [VI] is a well known form of vitamin B6 with well established utility.

RX(5) OF 7 COMPOSED OF RX(1), RX(3) RX(5) 2 A + 2 B + F ===> G

G YIELD 98%

RX(3) RCT D 1622-67-9

STAGE(1)

CON 80 deg C, 1 atm

STAGE (2)

RCT F 108-24-7

CON SUBSTAGE(1) 5 minutes

SUBSTAGE(2) 1 hour

SUBSTAGE(3) 200 - 20 mbar

STAGE(3)

SOL 25322-68-3 HOCH2CH2OH polymer

CON SUBSTAGE(1) 120 deg C, 0.1-0.01 mbar SUBSTAGE(2) 80 - 145 deg C, 0.1-0.01 mbar

PRO G 92671-67-5

NTE neat; monitored by GC; distn. last part second stage and all third stage  $\,$ 

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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